09659683 Page 1

ILE 'HOME' ENTERED AT 08:57:20 ON 08 MAR 2001

=> fil reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY 0.15

SESSION 0.15

FULL ESTIMATED COST

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STRUCTURE FILE UPDATES: 7 MAR 2001 HIGHEST RN 326471-42-5 DICTIONARY FILE UPDATES: 7 MAR 2001 HIGHEST RN 326471-42-5

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Structure search limits have been increased. See HELP SLIMIT for details.

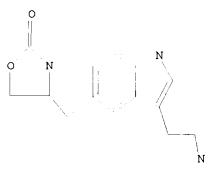
=> Uploading 09659683.str

L1 STRUCTURE UPLOADED

=> d

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 11 sss sam

SAMPLE SEARCH INITIATED 08:58:25 FILE 'REGISTRY' SAMPLE SCREEN SEARCH COMPLETED - 2 TO ITERATE

100.0% PROCESSED 2 ITERATIONS SEARCH TIME: 00.00.01

2 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: PROJECTED ANSWERS:

2 TO 124 2 TO

2 SEA SSS SAM L1

=> s 11 full

FULL SEARCH INITIATED 08:58:32 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED - 62 TO ITERATE

100.0% PROCESSED 62 ITERATIONS

42 ANSWERS

SEARCH TIME: 00.00.02

T.3

42 SEA SSS FUL L1

=> fil caplus

COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE TOTAL ENTRY SESSION 133.56 133.71

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FILE COVERS 1967 - 8 Mar 2001 VOL 134 ISS 11 FILE LAST UPDATED: 7 Mar 2001 (20010307/ED)

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=> s 13 full

122 L3 L4

=> s 14 and migraine?

2629 MIGRAINE? L5 78 L4 AND MIGRAINE?

=> s 15 and headache?

4183 HEADACHE?

L6 33 L5 AND HEADACHE?

09659683 Page 1

## => d 16 1-10 ibib abs hitstr

L6 ANSWER 1 OF 33 CAPLUS COPYRIGHT 2001 ACS ACCESSION NUMBER: 2000:790303 CAPLUS

DOCUMENT NUMBER: 133:329615

TITLE: Device and method using a 5-HT1 agonist for

prophylaxis of migraine

INVENTOR(S): Cady, Roger K.; Gutterman, Donna Lee; O'Quinn,

Stephen

Venson

PATENT ASSIGNEE(S): Glaxo Group Limited, UK SOURCE: PCT Int. Appl., 32 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

```
KIND DATE
                                            APPLICATION NO. DATE
      PATENT NO.
     WO 2000066115 A1 20001109 WO 1999-US9414 19990429
          W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS,
               JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ,
                MD, RU, TJ, TM
           RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
                ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
                CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
      AU 9937745
                          A1 20001117
                                                   AU 1999-37745
                                                                            19990429
PRIORITY APPLN. INFO.:
                                                      US 1998-185310
                                                                           19981103
                                                      wo 1999-US9414 19990429
```

The invention provides a method of preventing the headache phase AΒ of migraine in a human comprising administration of a 5HT1 agonist to said human exhibiting prodrome symptoms of migraine. Suitably, the method comprises administration of migraine headache phase-preventing effective amt. of the 5HT1 agonist. There is disclosed a preemptive prophylaxis migraine method using the following cognitive tests: Simple Reaction Time; Running Memory Continuous Performance Task; Matching to Sample; Math. Processing Task; and interprets the results as a percent of baseline indicator of need for prophylaxis. A preemptive prophylaxis migraine device including a microprocessor having a memory, a battery of tests loaded into the memory of the microprocessor and including a Simple Reaction Time, a Running Memory Continuous Performance Task, a Matching to Sample, and a Math. Processing Task; means for computing the score on a trial of these tests to establish a baseline and for storing the baseline in the memory; the means for computing being operative for computing the score of a subsequent trial of the tests and comparing the same to the stored baseline; and means for indicating a cognitive change.

139264-17-8 CAPLUS RN 2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, CN (CA INDEX NAME) (4S) - (9CI)

Absolute stereochemistry.

```
H
N
                                         NMe<sub>2</sub>
```

10 REFERENCE COUNT:

(4) Glaxo Group Ltd; EP 0303506 A 1989 CAPLUS REFERENCE(S):

(5) Glaxo Group Ltd; EP 0490689 A 1992 CAPLUS

(6) Glaxo Group Ltd; EP 0503440 A 1992 CAPLUS

(7) Lilly Co Eli; WO 9611006 A 1996 CAPLUS

(8) Merck Sharp & Dohme; EP 0497512 A 1992 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 2 OF 33 CAPLUS COPYRIGHT 2001 ACS L6 2000:490411 CAPLUS ACCESSION NUMBER:

DOCUMENT NUMBER: 133:232672

Zolmitriptan reverses blink reflex changes induced TITLE:

during the migraine attack in humans

de Tommaso, M.; Guido, M.; Libro, G.; Sciruicchio, AUTHOR(S):

V.;

Puca, F.

CORPORATE SOURCE: Interuniversity Center for the Study of Headache and

Neurotransmitter Disorders of the Central Nervous

System, Napoli, Florence, Italy

Neurosci. Lett. (2000), 289(1), 57-60 SOURCE:

CODEN: NELED5; ISSN: 0304-3940 Elsevier Science Ireland Ltd.

Journal DOCUMENT TYPE:

LANGUAGE: English

The question about the 5-hydroxytryptamine (5-HT)1B-1D receptors AΒ

PUBLISHER:

if the clin. efficacy in migraine attacks is linked with the action at the central level or at the peripheral one, is still unresolved.

We evaluated the effects of zolmitriptan and sumatriptan on blink reflex in thirty migraine without aura patients during the attacks in order to assess the central action on the trigeminal system. Both drugs were effective in reducing headache severity compared to placebo. In the migraine attack an increased area of the R3 component on the pain side was obsd.; it was suppressed by zolmitriptan, which confirmed its action on the central trigeminal circuits, though the clin. relevance of this effect could be questioned.

139264-17-8, Zolmitriptan

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (role of central trigeminal inhibition, measured by blink reflex changes, in mechanism of antimigraine action of zolmitriptan and sumatriptan in humans)

RN 139264-17-8 CAPLUS

2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, CN (4S) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.

) N

NMe<sub>2</sub>

REFERENCE COUNT:

REFERENCE(S):

11
(1) Berardelli, A; Recommendations for the Practice

οf

Clinical Neurophysiology: Guidelines of the International Federation of Clinical Neurophysiology, Electroencephalography and Clinical Neurophysiology 1999, V12, P250

(2) Cruccu, G; Brain Res 1991, V556, P209 CAPLUS

(3) Goadbsy, P; Ann Neurol 1988, V23, P193

(6) Humphrey, P; Eur Neurol 1991, V31, P282 MEDLINE

(8) Kaube, H; Br J Pharmacol 1993, V109, P788 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 33 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER:

2000:221634 CAPLUS

DOCUMENT NUMBER: TITLE:

132:231387

Migraine pharmacotherapy with oral triptans:

a rational approach to clinical management

AUTHOR(S):

Millson, David S.; Tepper, Stewart J.; Rapoport, Alan

Μ.

CORPORATE SOURCE:

Department of Medicines Management, Keele University,

Staffs, ST5 5BG, UK

SOURCE:

Expert Opin. Pharmacother. (2000), 1(3), 391-404

CODEN: EOPHF7; ISSN: 1465-6566

PUBLISHER:
DOCUMENT TYPE:

Ashley Publications Ltd. Journal; General Review

LANGUAGE:

English

A review with 54 refs. The recent clin. development of a no. of AB migraine specific 5-HT1B/1D agonist triptans with enhanced lipophilicity (TELs), relative to the first drug of this class sumatriptan, and with a range of different metabolic, pharmacokinetic and receptor affinity profiles, provides the potential for critically different clin. profiles. Eletriptan, naratriptan, rizatriptan and zolmitriptan display both increased stability to first pass metabolic inactivation by monoamine oxidase (MAO-A) and enhanced lipophilicity (4to > 120-fold more than sumatriptan), leading to increased oral bioavailability (2- to 5-fold more than the 14% reported for oral sumatriptan). Central penetration and increased receptor affinity and selectivity for the neuronal (5-HT1D) receptor also combine to allow for lower total oral dosing (i.e., unit doses of 15 mg or less compared with 50 - 300 mg doses of sumatriptan) and reduced peripheral exposure to the coronary vasoconstrictor (5-HT1B) receptor. The notable exception being eletriptan, where an active P-glycoprotein blood-brain barrier efflux system effectively negates these benefits and requires an 80 mg oral dose.

Differences in the metabolic balance between hepatic P 450 (esp. CYP 1A2) and MAO-A inactivation lead to potential drug interactions for all TELs with the oral contraceptive pill (OCP), fluvoxamine and the quinilone antibiotics (with increased triptan levels). An important but complex MAO-A interaction between a metabolite of propranolol and rizatriptan mandates dosage redn. (to 5 mg) for rizatriptan in the presence of propranolol treatment. There is also an abs. contraindication for the concurrent administration of the MAO-A inhibitor moclobemide and rizatriptan. All the new-marketed TELs have potential clin. benefits and were well-tolerated relative to sumatriptan. Both rizatriptan (10 mg)

and

zolmitriptan (2.5 mg and 5 mg) demonstrate at least equiv. efficacy to sumatriptan 25, 50 and 100 mg, resp., making them suitable first line agents for moderate or severe migraine headaches.

Rizatriptan has the fastest onset of effect of the TELs. Naratriptan would appear to have lower recurrent **headache** rate than sumatriptan, rizatriptan or zolmitriptan. Therefore, for **headaches** of long duration and with a tendency to recur

naratriptan may be the most appropriate treatment. Thus, knowledge of

the

metabolic, pharmacokinetic and clin. profiles of the TELs facilitates the selection of a triptan which allows optimization of the clin. benefits

for

individual patients, minimizing the risk of drug interactions and a minimally ED to reduce potential adverse events (AEs).

IT 139264-17-8, Zolmitriptan

RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BPR (Biological process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (migraine pharmacotherapy with oral triptans in humans)

RN 139264-17-8 CAPLUS

CN 2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



NMe2

REFERENCE COUNT: REFERENCE(S):

54

(12) Dixon, C; Biochem Pharmacol 1994, V47, P1253 CAPLUS

(24) Goadsby, P; Pain 1996, V67, P355 CAPLUS

(26) Holm, K; CNS Drugs 1999, V11, P159 CAPLUS

(31) Kramer, M; Neurology 1998, V51, P773 CAPLUS

(35) Millson, D; J Immunol Immunopharmacol 1998, V18, P99 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 33 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER:

2000:220181 CAPLUS

DOCUMENT NUMBER:

132:216448

TITLE:

Zolmitriptan in the acute treatment of

migraine: an overview

AUTHOR(S):

Goadsby, Peter J.; Peatfield, Richard

CORPORATE SOURCE: Institute

Institute of Neurology, The National Hospital for Neurology and Neurosurgery, London, WClN 3BG, UK Rev. Contemp. Pharmacother. (2000), 11(2), 91-97

CODEN: RCPHFW; ISSN: 0954-8602

PUBLISHER:

SOURCE:

Marius Press

DOCUMENT TYPE:

Journal; General Review

LANGUAGE: English

AB A review with .apprx.60 refs. Zolmitriptan is a 5HT1B/1D agonist that is indicated in the acute treatment of migraine. Preclin. studies indicate that its potential mechanisms of action include carotid vasoconstriction, inhibition of peripheral terminals of the trigeminal nerve that innervate pain-producing craniovascular structures, or inhibition of trigeminal neurons within the brainstem and upper cervical spinal cord. Clin. pharmacol. studies have demonstrated that

zolmitriptan

has a bioavailability of 40% and is largely metabolized in the liver, partly to an active metabolite, N-desmethylzolmitriptan. Zolmitriptan

dose-dependent efficacy across doses from 1 to 25 mg when measured by " headache response", in which moderate or severe pain becomes nil or mild, as well as by the "headache-free" endpoint. Based on a meta-anal. of the phase II/III placebo-controlled studies, zolmitriptan has, at 2 h after dosing, a headache response of 64% (95% Cl: 59-69%) for 2.5 mg and of 66% (95% Cl: 62-70%) for the 5 mg dose. The earliest onset of a significant response when compared to placebo is 45 min after dosing. Zolmitriptan is an effective acute treatment for attacks of migraine.

139264-17-8, Zolmitriptan

RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study);

USES (Uses)

(zolmitriptan in acute treatment of migraine in humans)

139264-17-8 CAPLUS RN

2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, (4s) - (9cI)(CA INDEX NAME)

Absolute stereochemistry.



NMe<sub>2</sub>

REFERENCE COUNT:

85 REFERENCE(S):

CAPLUS

(13) Dixon, R; Clin Drug Invest 1998, V15, P515

(15) Dixon, R; J Clin Pharmacol 1998, V38, P694

CAPLUS

(18) Feniuk, W; Br J Pharmacol 1989, V96, P83 CAPLUS (22) Gaist, D; Br Med J 1998, V316, P1352 CAPLUS (28) Goadsby, P; CNS Drugs 1998, V10, P271 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 5 OF 33 CAPLUS COPYRIGHT 2001 ACS 1.6

ACCESSION NUMBER:

2000:204790 CAPLUS

DOCUMENT NUMBER: TITLE:

AUTHOR(S):

SOURCE:

132:217083 Efficacy of zolmitriptan at early time-points for the

acute treatment of migraine and treatment of

recurrence: A randomized, placebo-controlled trial Ryan, Robert E., Jr.; Diamond, Seymour; Giammarco,

Rose A. M.; Aurora, Sheena K.; Reed, Ronald C.;

Fletcher, Pamela E.

CORPORATE SOURCE:

Ryan Headache Center, Chesterfield, MO, USA

CNS Drugs (2000), 13(3), 215-216 CODEN: CNDREF; ISSN: 1172-7047

PUBLISHER: Adis International Ltd.

DOCUMENT TYPE:

Journal

LANGUAGE:

English

Objective and Study Design: This double-blind, placebo-controlled trial assessed the efficacy of zolmitriptan vs. placebo at early time-points post-dose as an acute treatment for migraine and treatment of headache recurrence. Patients and Methods: Patients (18 to 65 yr) with a .qtoreq.l-yr history of migraine, age of onset <50 yr and an av. of 2 to 6 migraine headaches per mo were recruited by 45 North American research clinics. 1017 Patients were

randomized to receive treatment for each of 3 migraine headaches of moderate or severe baseline intensity (labeled A, B and C, and given in a randomized order). Within each headache, patients were randomly allocated to different treatment regimens. patient treated each of the 3 headaches (A, B and C) with up to 3 doses, i.e. an initial dose (headache A, zolmitriptan 2.5mg or placebo; headache B, zolmitriptan 5mg or placebo; headache C, zolmitriptan 2.5mg), recurrence prevention 8 h after initial dose [headache A and B, placebo (to maintain blind); headache C, zolmitriptan 2.5mg or placebo] and a recurrence treatment dose, if required (headache A and B, zolmitriptan 2.5mg or placebo; headache C, zolmitriptan 2.5mg). The 2 primary end-points were headache response rates 45 min after the initial dose of zolmitriptan 2.5 or 5mg or placebo, and headache response rates 2 h after zolmitriptan 2.5mg or placebo for the treatment of recurrent headache, in patients responding at 4 h to the initial dose. Results: A total of 734 patients treated all 3 headaches. Headache response following an initial dose of zolmitriptan 2.5 and 5mg was significantly greater than placebo by 45min (p<0.001, p<0.01, resp.) and was maintained at 1, 2 and 4 h. Headache response following zolmitriptan treatment for recurrence was higher than that for placebo, but the difference did not reach statistical significance. A dose taken 8 h after the initial dose did

not

appear to provide any benefit in preventing recurrent headache. Conclusions: Zolmitriptan 2.5 and 5mg provides a rapid onset of action with significant relief of migraine headache by 45 min post-dose compared with placebo.

IT 139264-17-8, Zolmitriptan

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(efficacy of zolmitriptan at early time-points for acute treatment of migraine and treatment of recurrence in humans)

RN 139264-17-8 CAPLUS

2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, CN (4s) - (9cI)(CA INDEX NAME)

NMe<sub>2</sub>

Absolute stereochemistry.



ANSWER 6 OF 33 CAPLUS COPYRIGHT 2001 ACS 2000:98329 CAPLUS

ACCESSION NUMBER: DOCUMENT NUMBER:

132:141982

TITLE: Prevention of migraine recurrence INVENTOR (S): Jackson, Neville Colin; Uden, Stephen

PATENT ASSIGNEE(S): Pfizer Limited, UK; Pfizer Inc.

SOURCE: PCT Int. Appl., 23 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE		
WO 2000006161	Al	20000210	WO 1999-IB1105	19990614		

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DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS,
             JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK,
             MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,
             TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ,
             MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
             ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
             CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     AU 9939521
                            20000221
                                           AU 1999-39521
                                                             19990614
                       A1
                                           GB 1998-16556
                                                             19980730
PRIORITY APPLN. INFO.:
                                           WO 1999-IB1105
                                                             19990614
     The invention relates to the use of eletriptan, or a pharmaceutically
AB
     acceptable salt or compn. thereof, for the manuf. of a medicament for the
     prevention of migraine recurrence and to the use of a 5-HTlB/lD
     receptor agonist, or a pharmaceutically acceptable salt or compn.
thereof,
     for the manuf. of a dual-, sustained-, delayed-, controlled- or
     pulsed-release pharmaceutical compn. for the prevention of
     migraine recurrence. A clin. example was given showing that
     eletriptan prevents migraine recurrence since when a second dose
     of eletriptan was administered following successful treatment of an
     initial migraine, the no. of patients experiencing a
     migraine recurrence was at least halved compared with placebo.
     139264-17-8, Zolmitriptan
ΤT
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (prevention of migraine recurrence with 5-HT1B/1D agonists)
RN
     139264-17-8
                 CAPLUS
     2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-,
CN
     (4S) - (9CI)
                 (CA INDEX NAME)
Absolute stereochemistry.
                                     NMe<sub>2</sub>
      Ν
REFERENCE COUNT:
                         (1) Alza Corporation; WO 9912527 A 1999 CAPLUS
REFERENCE(S):
                         (2) Millson, D; EOS RIVISTA IMMUNOLOGIA
                              IMMUNOLOFARMACOLOGIA 1998, V18(3-4), P99 CAPLUS
                         (3) Pfizer Limited; WO 9901135 A 1999 CAPLUS
                         (4) Reddy, P; FORMULARY 1998, V33, P521 CAPLUS
                         (5) Saxena, P; EXPERT OPINION ON INVESTIGATIONAL
DRUGS
                              1996, V5(5), P581 CAPLUS
                         ALL CITATIONS AVAILABLE IN THE RE FORMAT
     ANSWER 7 OF 33 CAPLUS COPYRIGHT 2001 ACS
                         2000:92710 CAPLUS
ACCESSION NUMBER:
DOCUMENT NUMBER:
                         132:117519
                         Zolmitriptan is effective for the treatment of
TITLE:
                         persistent and recurrent migraine
                       headache
                         Mauskop, Alexander; Farkkila, Markus; Hering-Hanit,
AUTHOR(S):
                         Rachel; Rapoport, Alan; Warner, John
                         New York Headache Center, New York, 11201, USA
CORPORATE SOURCE:
```

Curr. Med. Res. Opin. (1999), 15(4), 282-289

CODEN: CMROCX; ISSN: 0300-7995

LibraPharm Ltd.

SOURCE:

PUBLISHER:

AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,

DOCUMENT TYPE: Journal LANGUAGE: English Zolmitriptan is a 5-HTlB/1D receptor agonist for the acute treatment of migraine. This study examd, the efficacy of a second dose of zolmitriptan for the treatment of persistent or recurrent headache . Part 1 was a randomized, placebo-controlled, double-blind evaluation of 2.5 mg and 5 mg zolmitriptan for the treatment of persistent migraine headache, two hours after an initial dose of 2.5 mg zolmitriptan. In Part 2 (open-label), patients treated the first two attacks with 2.5 mg zolmitriptan, thereafter patients could treat any initial, persistent or recurrent migraine headache with 2.5 mg or 5 mg zolmitriptan. The unique design of this trial allowed patients to adjust their treatment to attain max. headache relief and control of their disease. Of 2800 patients treating an initial migraine headache in Part 1, 989 patients took a second dose to treat persistent headache of moderate or severe intensity. Headache response rates were similar across the three treatment groups, but the pain-free response rate was significantly higher with 5 mg zolmitriptan than with placebo (p < 0.001). In Part 2, 2499 patients treated 49 784 migraine attacks (excluding the first two attacks, which had to be treated with 2.5 mg zolmitriptan), of which 66% required only a single dose of zolmitriptan. Patients treated 22% of attacks with a second dose of zolmitriptan for persistent headache. A headache response was achieved in 80% and 73% of persistent **headaches** treated with 2.5 mg or 5 mg zolmitriptan, resp. Corresponding pain-free responses following treatment of persistent headaches of any intensity were 64% and 52%. Eight per cent of attacks were treated with a second dose of zolmitriptan for moderate or severe recurrent headache. A headache response was achieved in 90% and 86% of moderate/severe attacks, with a pain-free response in 78% and 70% of attacks of any intensity treated with 2.5 mg and 5 mg, resp. Zolmitriptan was well tolerated. In conclusion, 2.5 mg and 5 mg zolmitriptan are highly effective in treating both persistent and recurrent migraine headache. 139264-17-8, Zolmitriptan ŤΤ RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (zolmitriptan is effective for treatment of persistent and recurrent migraine headache in humans) 139264-17-8 CAPLUS RN 2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, CN (4S) - (9CI) (CA INDEX NAME) Absolute stereochemistry. И 0-NMe<sub>2</sub> Ν

REFERENCE COUNT: REFERENCE(S):

11

- (1) Cull, R; J Neurol Neurosurg Psychiatry 1997, V62, P490 MEDLINE
- (5) Mathew, N; Neurol Clin 1997, V15(1), P61 MEDLINE

(7) Rapoport, A; Neurology 1997, V49, P1210 CAPLUS(9) Solomon, G; Neurology 1997, V49, P1219 CAPLUS

(10) Tepper, S; Curr Med Res Opin 1999, V15(4), P254 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 8 OF 33 CAPLUS COPYRIGHT 2001 ACS 1.6

ACCESSION NUMBER:

2000:92709 CAPLUS

DOCUMENT NUMBER:

132:117518

TITLE:

Zolmitriptan provides consistent migraine

relief when used in the long term

AUTHOR(S):

Tuchman, Michael; Edvinsson, Larrs; Geraud, Gilles;

Korczyn, Amos; Mauskop, Alexander; Pfaffenrath,

Volker

CORPORATE SOURCE:

Palm Beach Neurological Group, Palm Beach Gardens,

FL.

33410, USA

SOURCE:

Curr. Med. Res. Opin. (1999), 15(4), 272-281

CODEN: CMROCX; ISSN: 0300-7995

PUBLISHER:

LibraPharm Ltd.

DOCUMENT TYPE:

English

Journal LANGUAGE:

Migraine is a chronic disease that significantly reduces quality AB of life between, as well as during, attacks. Treatments that provide consistent relief may reduce the burden of the disease. In the open-label

phase of a two-part study, patients could choose to treat initial, persistent or recurrent migraine headache of any intensity with 2.5 mg or 5 mg zolmitriptan. This novel study design allowed patients to manage and maximize their migraine relief. Headache response rates and pain-free response rates were assessed within two hours of dosing with zolmitriptan, and response rates were compared across migraines with and without a history of aura, and assocd. or not with menses. Consistency of response was also assessed

in those patients treating at least 20 attacks. Of 49 784 attacks treated, 66% (32 737 attacks) were treated with a single dose of zolmitriptan. Two-hour headache response rates to an initial dose of 2.5 mg or 5 mg zolmitriptan were 85% (median 95%) and 79% (median 88%), resp., across all attacks. Corresponding pain-free response rates were 69% and 59%. Responses were independent of gender and age and were similar in patients with and without aura and in attacks assocd. or not assocd. with menses. Consistent response rates were achieved within individual patients; during months 1 to 3, 64% of patients reported a headache response in > 75% of their migraine attacks. In patients treating at least 20 attacks, 2.5 mg and 5 mg zolmitriptan

produced consistently high headache response rates (range 84-91% and 76-84%, resp.) and pain-free response rates (range 70-76% and 58-65%, resp.) across attacks. In the minority of attacks requiring a second

dose

of zolmitriptan for persistent or recurrent headache, response rates to a second dose were also consistent across attacks. In conclusion, zolmitriptan 2.5 mg and 5 mg show consistent effectiveness in the treatment of multiple migraine attacks in individual patients and are unaffected by gender, age and the presence of aura or

the

relationship to menses.

139264-17-8, Zolmitriptan TΤ

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (zolmitriptan provides consistent migraine relief when used in long term in humans)

139264-17-8 CAPLUS RN

2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, CN (4S) - (9CI) (CA INDEX NAME)

REFERENCE COUNT:

2.1

(1) Clarke, C; Q J Med 1996, V89, P77 MEDLINE REFERENCE(S): (6) Goadsby, P; Pain 1996, V67, P355 CAPLUS

(13) Rapoport, A; Neurology 1997, V49, P1210 CAPLUS (16) Solomon, G; Neurology 1997, V49, P1219 CAPLUS (20) Tepper, S; Curr Med Res Opin 1999, V15(4), P254 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 9 OF 33 CAPLUS COPYRIGHT 2001 ACS L6

2000:92708 CAPLUS ACCESSION NUMBER:

132:117473 DOCUMENT NUMBER:

TITLE:

AUTHOR(S):

A long-term study to maximize migraine

relief with zolmitriptan

Tepper, Stewart J.; Donnan, Geoffrey A.; Dowson, Andrew J.; Bomhof, Martin A. M.; Elkind, Arthur;

Meloche, Jacques; Fletcher, Pamela E.; Millson, David

S.

The Polyclinic, Seattle, USA CORPORATE SOURCE:

SOURCE: Curr. Med. Res. Opin. (1999), 15(4), 254-271

CODEN: CMROCX; ISSN: 0300-7995

PUBLISHER: LibraPharm Ltd.

DOCUMENT TYPE: Journal LANGUAGE: English

Part 1 of this international study was a randomized, double-blind, placebo-controlled study of 2.5 mg and 5 mg zolmitriptan (Zomig) in the treatment of persistent migraine headache, two hours after an initial dose of 2.5 mg zolmitriptan. Part 2 was a non-comparative evaluation of long-term, unrestricted zolmitriptan use for

treatment of initial, persistent and recurrent migraine headaches. In Part 1, following the treatment of moderate or severe persistent headache, two-hour headache response rates with 5 mg zolmitriptan (51.6%, n = 322), 2.5 mg zolmitriptan

n = 324) and placebo (51.6%, n = 343) were not significantly different. However, the pain-free response rate following the treatment of persistent

migraine headache of any intensity was significantly higher with 5 mg zolmitriptan than with placebo (36.0% vs. 25.5%; p < 0.001). This was predominantly due to effects in the subgroup of patients

with mild headache. Thus, migraine relief in patients whose initial headache shows a partial response to 2.5 mg zolmitriptan may be maximized by a second 5 mg dose. In Part 2 (involving

2499 evaluable patients), 65.8% of attacks were treated with a single dose

of zolmitriptan (2.5 mg or 5 mg). Of those migraine attacks initially treated with 2.5 mg zolmitriptan, 70.3% required no further dose, similarly 62.7% of migraine attacks treated initially with 5 mg zolmitriptan only required a single dose. Over the whole attack (i.e. initial and any persistent headache), headache

"Level of pain" was the primary factor influencing the choice of dose. Zolmitriptan provided consistent migraine headache relief in the majority of patients and was well tolerated. 139264-17-8, Zolmitriptan RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); (a long-term study to maximize migraine relief with zolmitriptan) RN 139264-17-8 CAPLUS 2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, CN (CA INDEX NAME) (4s) - (9cI)Absolute stereochemistry. H N 0 S 0 NMe<sub>2</sub> Ν REFERENCE COUNT: (1) Dixon, R; Cephalalgia 1997, V17(Suppl 18), P15 REFERENCE(S): (2) Edmeads, J; Cephalalgia 1997, V17(Suppl 18), P41 (3) Goadsby, P; Pain 1996, V67, P355 CAPLUS (4) Headache Classification Committee Of The International Headache Society; Cephalalgia 1988, V8(Suppl 7), P1 (6) Rapoport, A; Neurology 1997, V49, P1210 CAPLUS ALL CITATIONS AVAILABLE IN THE RE FORMAT ANSWER 10 OF 33 CAPLUS COPYRIGHT 2001 ACS 1999:794038 CAPLUS ACCESSION NUMBER: 132:18404 DOCUMENT NUMBER: The triptans: A summary TITLE: Tepper, Stewart J.; Rapoport, Alan M. AUTHOR(S): Department of Neurology, University of Washington Medical School, Seattle, WA, USA CORPORATE SOURCE: CNS Drugs (1999), 12(5), 403-417 SOURCE: CODEN: CNDREF; ISSN: 1172-7047 PUBLISHER: Adis International Ltd. DOCUMENT TYPE: Journal; General Review LANGUAGE: English A review with 96 refs. New migraine-specific medications, the triptans, are changing the clinician's approach to the treatment of migraine. These drugs are pharmacol. based on agonism of serotonin (5-hydroxytryptamine; 5-HT) receptors. The triptans are selective 5-HT1B/1D receptor agonists and are believed to reverse the mechanisms of migraine, which may include changes in dural vessel calibre, neurogenic inflammation and central trigeminal neuronal activation. The first marketed triptan was sumatriptan. Sumatriptan is available in a highly effective and rapidly active s.c. injectable formulation (optimal dose 6mg), as well as nasal (optimal dose 20mg), oral (optimal dose 50mg) and suppository (optimal dose 25mg) forms. multiple forms allow for maximal flexibility in crafting an acute care regimen for patients. New triptans are being released in rapid sequence; each new drug has some distinct clin. advantages. All of the triptans released after sumatriptan are more lipophilic and have higher oral

bioavailability than sumatriptan. Zolmitriptan was the second marketed

response rates to one or two zolmitriptan doses were greater than 88.8%.

triptan, and is available in oral tablet form (optimal dose 2.5mg). A fast melt prepn. is to be released in Europe in 1999 and a nasal spray form is under development. Zolmitriptan is a well absorbed oral triptan with very high consistency of effect in nonblind studies of over 1 yr in duration. Naratriptan (optimal dose 2.5mg) has a relatively slow onset

οf

action but is assocd. with the lowest headache recurrence rate of the currently available triptans. It has a very good adverse event profile with excellent tolerability. Rizatriptan is available as an oral tablet and a rapidly dissolving oral wafer (melt formulation). The optimal dose is 10mg. It is similar to sumatriptan in being an effective oral triptan with a relatively high recurrence rate. Future triptans include eletriptan, which has a very high efficacy in oral form at a dose of 80mg, but a high rate of adverse events at this dose. Lower doses (20 and 40mg) are similar in profile to sumatriptan. Frovatriptan (optimal dose 2.5mg) has an onset of effect and overall efficacy similar to those of naratriptan, but a very low recurrence rate. Almotriptan has the highest oral bioavailability of the triptans. Selection of an acute care migraine medication should be based on need for specific delivery form, headache- and pain-free response at 2 and 4 h after administration, adverse event profile, consistency of response and recurrence rate. Adverse events for triptans include tightening,

flushing

and paraesthesias of unknown cause. All triptans cause narrowing of arteries, including coronary arteries, and although serious adverse vascular events are very rare, triptan use is contraindicated in patients with vascular disease.

IT 139264-17-8, Zolmitriptan

RL: BAC (Biological activity or effector, except adverse); BPR (Biological

process); THU (Therapeutic use); BIOL (Biological study); PROC (Process);
USES (Uses)

(triptans for treatment of migraine in humans)

RN 139264-17-8 CAPLUS

CN 2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, (4S)- (9CI) (CA INDEX NAME)

NMe<sub>2</sub>

Absolute stereochemistry.

O N H

REFERENCE COUNT: REFERENCE(S):

100

- (16) Cheng, H; Biopharm Drug Dispos 1996, V17, P17 CAPLUS
- (32) Goadsby, P; CNS Drugs 1998, V10, P271 CAPLUS
- (50) Kramer, M; Neurology 1998, V51, P773 CAPLUS
- (54) Martin, G; Headache treatment: trial methodology and new drugs 1997, P257 CAPLUS
- (56) Mathew, N; Neurology 1997, V49, P1485 CAPLUS ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d 16 11-20 ibib abs hitstr

L6 ANSWER 11 OF 33 CAPLUS COPYRIGHT 2001 ACS ACCESSION NUMBER: 1999:594801 CAPLUS

DOCUMENT NUMBER: 131:208393

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Zolmitriptan: A review of its use in migraine
TITLE:
                         Spencer, Caroline M.; Gunasekara, Nishan S.; Hills,
AUTHOR(S):
                         Carol
                        Adis International Limited, Auckland, N. Z.
CORPORATE SOURCE:
                        Drugs (1999), 58(2), 347-374
SOURCE:
                        CODEN: DRUGAY; ISSN: 0012-6667
                        Adis International Ltd.
PUBLISHER:
DOCUMENT TYPE:
                         Journal; General Review
LANGUAGE:
                         English
    A review with 86 refs. Zolmitriptan is a selective serotonin 5-HTlB/ID
    receptor agonist ("triptan"). Its efficacy and tolerability have been
    assessed in a no. of randomized, placebo-controlled, double-blind trials
    in large nos. of adults with moderate to severe migraine
    attacks. Oral zolmitriptan at 2.5 and 5 mg has a rapid onset of action
     (significant headache relief is obtained after 45 min) and
     efficacy is sustained in most patients who respond at 2 h. The drug is
    more effective than placebo, as measured by a no. of parameters,
including
     2-h headache response rates and pain-free response rates. Other
     symptoms of migraine, including nausea, photophobia and
    phonophobia, are also alleviated with zolmitriptan.
                                                          Zolmitriptan is
     effective in the treatment of migraine assocd. With menses and
    migraine with aura. There is some evidence to support the use of
     zolmitriptan in patients with migraine who have had a poor
     response to previous therapy. The efficacy of zolmitriptan appears to be
    maintained, with no tachyphylaxis, following repeated administration for
    multiple attacks of migraine over a prolonged period of time,
    with high headache response rates reported for all attacks. In
    comparison with placebo, the incidence of persistent migraine
    headache is reduced by zolmitriptan, and recurrent
    migraine headache occurs less frequently with the active
    treatment. Zolmitriptan has also demonstrated efficacy in the treatment
     of persistent and/or recurrent migraine headache. For
     relief of migraine headache, zolmitriptan at 5 mg had
     similar efficacy as sumatriptan at 100 mg for a single attack, but it
     generally was more effective than sumatriptan at 25 and 50 mg for
multiple
     attacks, in single trials. The incidence of recurrent headache
     with zolmitriptan was similar to that with sumatriptan. Zolmitriptan is
     generally well tolerated, with most adverse events being mild to
moderate,
     transient and resolving without intervention or the need for treatment
     withdrawal. The most common adverse events with zolmitriptan therapy are
     asthenia, heaviness other than that of the chest or neck, dry mouth,
    nausea, dizziness, somnolence, paresthesia, warm sensation, tightness,
    vasodilation and chest pain. Conclusion: Zolmitriptan is effective
     a wide range of migraine subtypes, maintains efficacy when used
     in the long term and is generally well tolerated. Further clin.
     experience is necessary to define the position of zolmitriptan among
     currently or soon to be available selective 5-HTlB/1D receptor agonists.
     However, on the basis of available data, zolmitriptan should emerge as a
     useful treatment option in the management of patients with moderate to
     severe migraine.
    139264-17-8, Zolmitriptan
ΙT
     RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or
     effector, except adverse); BPR (Biological process); THU (Therapeutic
     use); BIOL (Biological study); PROC (Process); USES (Uses)
        (zolmitriptan use in human migraine)
     139264-17-8 CAPLUS
RN
     2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-,
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Absolute stereochemistry.

(4S) - (9CI) (CA INDEX NAME)

NMe<sub>2</sub>

REFERENCE COUNT: 86
REFERENCE(S): (7) Di

(7) Dixon, R; Br J Clin Pharmacol 1997, V43, P273 CAPLUS

(11) Dixon, R; Clin Drug Invest 1998, V15, P515

CAPLUS

(14) Dixon, R; J Clin Pharmacol 1998, V38, P694

CAPLUS

(21) Gillotin, C; Int J Clin Pharmacol Ther 1997,

V35,

P522 CAPLUS

(28) Goadsby, P; Pain 1996, V67, P355 CAPLUS ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 12 OF 33 CAPLUS COPYRIGHT 2001 ACS ACCESSION NUMBER: 1999:466439 CAPLUS

DOCUMENT NUMBER:

131:96701

TITLE:

Oral 5-HT1 receptor agonists for migraine:

comparative considerations

AUTHOR(S):

PUBLISHER:

Smith, Melissa A.; Ross, Mary B.

CORPORATE SOURCE: Dep. of Pharmaceutical Care, U

Dep. of Pharmaceutical Care, Univ. of Iowa Hospitals

and Clinics, Iowa City, IA, USA

SOURCE:

Formulary (1999), 34(4), 324-326, 329-330, 331-332,

335-336, 338

CODEN: FORMF9; ISSN: 1082-801X Advanstar Communications, Inc.

DOCUMENT TYPE:

Journal; General Review

LANGUAGE:

English

AB A review with 25 refs. Three new oral 5-HT1 receptor agonists (naratriptan, rizatriptan, and zolmitriptan) have recently joined sumatriptan as options for the treatment of acute **migraine** attacks with or without aura. Currently, the only three published comparative clin. trials use sumatriptan as one of the comparator agents; several other comparative trials exist in abstr. form only. The

available
data indicate similar efficacy and tolerability among the agents.
Sumatriptan offers the advantages of established, long-term safety and efficacy data, few documented drug interactions, no dosage adjustment requirements in patients with renal dysfunction, and availability in injectable and nasal-spray formulations. Naratriptan, because of its longer half-life, may prove useful in patients who experience migraine recurrence with sumatriptan, rizatriptan, or zolmitriptan. Rizatriptan tablets (regular formulation) offer a reasonable option when time to onset of headache relief is not optimal with sumatriptan. Drawing conclusions about the superiority of any one 5-HT1 receptor agonist over the others is difficult because of

the

RN

scarcity of published comparative trials.

IT 139264-17-8, Zolmitriptan

RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BPR (Biological process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(oral 5-HT1 receptor agonists comparison in treatment of

migraine in humans)

139264-17-8 CAPLUS

CN 2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-,

Absolute stereochemistry.

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O NMe2
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REFERENCE COUNT: REFERENCE(S):

25

(2) Capobianco, D; Mayo Clin Proc 1996, V71, P1055 MEDLINE

(6) Ferrari, M; Lancet 1998, V351, P1043 MEDLINE

(7) Gijsman, H; Cephalalgia 1997, V17, P647 MEDLINE

(12) Goadsby, P; J Neurol Neurosurg Psychiatry 1998, V64, P143 MEDLINE

(18) Longmore, J; Br J Clin Pharmacol 1996, V42, P431 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 13 OF 33 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1999:464802 CAPLUS

DOCUMENT NUMBER: 131:251938

TITLE: Pharmacological aspects of experimental

headache models in relation to acute

antimigraine therapy

AUTHOR(S): De Vries, Peter; Villalo, Carlos M.; Saxena, Pramod

R.

SOURCE:

CORPORATE SOURCE: P.O. Box 1738, Dutch Migraine Research Group and

Cardiovascular Research Institute (COEUR), Department

of Pharmacology, Erasmus University Medical Centre

Rotterdam (EMCR), Rotterdam, 3000 DR, Neth. Eur. J. Pharmacol. (1999), 375(1-3), 61-74

CODEN: EJPHAZ; ISSN: 0014-2999

PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review with over 150 refs. The last decade has witnessed a tremendous progress in the acute therapy of migraine, with sumatriptan, belonging to a new class of drugs, now known as 5-HT1B/1D/1F receptor agonists, leading the way. The undoubted success of sumatriptan stimulated the development of new triptans as well as other suitable pharmacol. tools and exptl. models to probe into complex migraine mechanisms. In this review, we discuss the main exptl. models for migraine, against the background of the disease pathophysiol. and 5-HT receptors considered most important for migraine therapy. We believe that the use of these migraine models will provide even better treatment for migraine patients in the next millennium.

IT 139264-17-8, Zolmitriptan

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (pharmacol. aspects of exptl. headache models in relation to acute antimigraine therapy)

RN 139264-17-8 CAPLUS

CN 2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

0 S N Н

NMe<sub>2</sub>

REFERENCE COUNT:

142

REFERENCE(S):

(1) Adham, N; Mol Pharmacol 1992, V41, Pl CAPLUS

(2) Adham, N; Proc Natl Acad Sci USA 1993, V90, P408 CAPLUS

(3) Bard, J; Naunyn-Schmiedeberg's Arch Pharmacol 1996, V354, P237 CAPLUS

(4) Bax, W; Eur J Pharmacol 1993, V239, P203 CAPLUS

(5) Beattie, D; Br J Pharmacol 1994, V112, P262

CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 14 OF 33 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER:

1999:257165 CAPLUS

DOCUMENT NUMBER:

131:96735

TITLE:

Do we need another triptan for the acute treatment of

migraine headache?

AUTHOR(S):

Millson, D.

CORPORATE SOURCE:

Department of Medicines Management, Keele University,

Staffordshire, UK

SOURCE:

EOS--Riv. Immunol. Immunofarmacol. (1998), 18(3-4),

99-104

CODEN: EOSSDJ; ISSN: 0392-6699

PUBLISHER:

Sigma-Tau s.p.a

DOCUMENT TYPE:

Journal; General Review

LANGUAGE:

English

A review with 26 refs. Sumatriptan, the first and most extensively studied triptan was a significant therapeutic innovation delivering a high

degree of within-patient consistency and robust efficacy with the s.c. formulation; with an extensive range of doses (5,10,25, 50 and 100 mg) across a no. of delivery systems (oral, intra-nasal & rectal). However sumatriptan is hampered by poor oral bioavailability (<14%) due to extensive first pass hepatic metab. limiting its efficacy, and increasing its potential for drug interactions particularly when MAO inhibitors are used a prophylactic agents in migraine. Recently Ferrari concluded that "Next generation treatments should aim for greater oral bioavailability assocd. With a faster and more consistent response, a longer duration of action with fewer recurrences, greater selectivity for the carotid vascular bed, less abuse potential, and a lower price". So just how do the new triptans match up to these new challenges All the new triptans (almotriptan, eletriptan, frovatriptan, naratriptan, rizatriptan and zolmitriptan) are more lipophilic than sumatriptan (from 4 to >120 fold) have abs. bioavailabilities ranging from 40 to 80%. In addn. both rizatriptan and zolmitriptan have active circulating metabolites which

may

contribute to clin. activity. The new generation triptans all have increased lipophilicity relative to sumatriptan, which appears to confer enhanced oral bioavailability and CNS penetration. The clin. differences across the triptans in terms of rapidity of onset, efficacy and

recurrence

rates allows the physician greater choice, enabling therapy to be tailored

to the needs of the individual patient.

139264-17-8, Zolmitriptan

RL: BAC (Biological activity or effector, except adverse); BPR (Biological

process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (treatment of migraine headache with newer triptans with improved lipophilicity and bioavailability) RN 139264-17-8 CAPLUS 2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, CN (4S) - (9CI) (CA INDEX NAME) Absolute stereochemistry.

NMe2

H N

REFERENCE COUNT:

REFERENCE(S):

26

(3) Cook, R; BMJ 1995, V310, P452 MEDLINE (15) Perry, C; Drugs 1998, V55, P889 CAPLUS

(17) Rapoport, A; Neurology 1997, V49, P1210 CAPLUS

(19) Solomon, G; Neurology 1997, V49, P1219 CAPLUS (24) Tfelt-Hansen, P; Lancet 1995, V346, P923 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 15 OF 33 CAPLUS COPYRIGHT 2001 ACS L6 1999:167165 CAPLUS

ACCESSION NUMBER: DOCUMENT NUMBER:

131:13798

TITLE:

Characterization of the 5-HT receptor binding profile of eletriptan and kinetics of [3H]eletriptan binding

at human 5-HT1B and 5-HT1D receptors

AUTHOR(S):

Napier, Carolyn; Stewart, Michael; Melrose, Heather;

Hopkins, Brian; McHarg, Aileen; Wallis, Rob

CORPORATE SOURCE:

Department of Discovery Biology, Pfizer Central

Research, Kent, Sandwich, CT13 9NJ, UK

Eur. J. Pharmacol. (1999), 368(2/3), 259-268SOURCE:

CODEN: EJPHAZ; ISSN: 0014-2999

PUBLISHER:

Elsevier Science B.V.

DOCUMENT TYPE:

Journal

LANGUAGE: English The affinity of eletriptan ((R)-3-(1-methyl-2-pyrrolidinylmethyl)-5-[2-methyl-2-pyrrolidinylmethyl)-5-[2-methyl-2-pyrrolidinylmethyl)-5-[2-methyl-2-pyrrolidinylmethyl-2-pyrrolidinylmethyl)-5-[2-methyl-2-pyrrolidinylmethyl-2-pyrrolidinylmethyl-3-[2-methyl-2-pyrrolidinylmethyl-3-[2-methyl-2-pyrrolidinylmethyl-3-[2-me(phenylsulfonyl)ethyl]-1H-indole) for a range of 5-HT receptors was compared to values obtained for other 5-HT1B/1D receptor agonists known

to

be effective in the treatment of migraine. Eletriptan, like sumatriptan, zolmitriptan, naratriptan and rizatriptan had highest affinity for the human 5-HT1B, 5-HT1D and putative 5-HT1f receptor. Kinetic studies comparing the binding of [3H]eletriptan and [3H] sumatriptan to the human recombinant 5-HT1B and 5-HT1D receptors expressed in HeLa cells revealed that both radioligands bound with high specificity (>90%) and reached equil. within 10-15 min. However, [3H]eletriptan had over 6-fold higher affinity than [3H]sumatriptan at

the

5-HT1D receptor (KD: 0.92 and 6.58 nM, resp.) and over 3-fold higher affinity than [3H] sumatriptan at the 5-HT1B receptor (KD: 3.14 and 11.07 nM, resp.). Assocn. and dissocn. rates for both radioligands could only be accurately detd. at the 5-HT1D receptor and then only at 4.degree..

Αt

this temp., [3H]eletriptan had a significantly faster assocn. rate (Kon 0.249 min-1 nM-1) than [3H]sumatriptan (Kon 0.024 min-1 nM-1) and a significantly slower off-rate (Koff 0.027 min-1 compared to 0.037 min-1 for [3H] sumatriptan). These data indicate that eletriptan is a potent ligand at the human 5-HT1B, 5-HT1D and 5-HT1f receptors and are

consistent

with its potent vasoconstrictor activity and use as a drug for the acute treatment of migraine headache.

139264-17-8, Zolmitriptan IT

RL: BPR (Biological process); BIOL (Biological study); PROC (Process) (characterization of 5-HT receptor binding profile of eletriptan and kinetics of [3H]eletriptan binding at human 5-HT1B and 5-HT1D

in relation to other 5-HT agonists and vasoconstrictor activity and migraine headache treatment)

139264-17-8 CAPLUS RN

2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, CN (CA INDEX NAME) (4S) - (9CI)

NMe<sub>2</sub>

Absolute stereochemistry.



REFERENCE COUNT:

52

REFERENCE(S):

- (1) Bach, A; J Receptor Res 1993, V13(1-4), P479 CAPLUS
- (3) Bard, J; Naunyn-Schmiedeberg's Arch Pharmacol 1996, V354, P237 CAPLUS
- (4) Bonhaus, D; Br J Pharmacol 1995, V115, P622

CAPLUS

- (6) Cheng, Y; Biochem Pharmacol 1973, V22, P3099 CAPLUS
- (8) De Vry, J; Psychopharmacology 1995, V121, P1

ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 16 OF 33 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER:

1999:129095 CAPLUS

DOCUMENT NUMBER:

130:347246

TITLE:

SOURCE:

Vasoconstriction in human isolated middle meningeal arteries: determining the contribution of 5-HTIB- and

5-HTIF-receptor activation

AUTHOR(S):

PUBLISHER:

Razzaque, Z.; Heald, M. A.; Pickard, J. D.; Maskell,

L.; Beer, M. S.; Hill, R. G.; Longmore, J.

CORPORATE SOURCE:

Merck Sharp & Dohme Research Laboratories,

Neuroscience Research Centre, Harlow, CM20 2QR, UK Br. J. Clin. Pharmacol. (1999), 47(1), 75-82

CODEN: BCPHBM; ISSN: 0306-5251

Blackwell Science Ltd.

DOCUMENT TYPE:

Journal

English LANGUAGE: Sumatriptan is a 5-HT1B/1D-receptor agonist which also has affinity for AB

5-HT1F-receptors. The vasoconstrictor effects of sumatriptan are thought to be 5-HT1B-receptor mediated and these receptors have been shown to be expressed in human cranial blood vessels. However, in the same tissue mRNA coding for 5-HT1F-receptors has also been identified and this study addresses the possibility of whether 5-HT1F-receptor activation contributes to vasoconstriction. The ability of two selective 5-HT1B/1D-receptor antagonists (GR125,743 and GR127,935) with no affinity for 5-HT1F-receptors, to inhibit sumatriptan evoked contractions in human isolated middle meningeal artery was investigated. Using a series of 5-HT1B/1D-receptor agonists (sumatriptan, zolmitriptan, CP122,288, L-741,519 and L-741,604), some with high affinity for 5-HT1F-receptors

and

the non-selective 5-HT-receptor agonists 5-HT and 5-CT, the authors compared the vasoconstrictor potency of these drugs in human isolated middle meningeal artery with their affinities at cloned human 5-HTIB-, 5-HT1D-and 5-HT1F-receptors expressed in CHO cell lines. GR125,743 antagonized sumatriptan evoked contractions in a competitive manner (apparent pA2 9.1) and GR127,935 antagonized sumatriptan-induced responses

in a non-competitive manner (reducing the max. contraction to 27%).

was a significant correlation between vasoconstrictor potency and 5-HT1B-receptor affinity (r=0.93) but not with 5-HT1D- or 5-HT1F-

affinity (r=0.74, r=0.31, resp.). These expts. show that in human middle

meningeal artery vasoconstriction to sumatriptan-like agents is 5-HT1B-receptor mediated with little if any contribution from 5-HT1F-receptor activation. The results are discussed in relation to the treatment of migraine headaches with serotonin

139264-17-8, Zolmitriptan

RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)

(vasoconstriction in human isolated middle meningeal arteries from sumatriptan-like serotonin agonists and detg. the contribution of 5-HT1B- and 5-HT1F-receptor activation in relation to migraine

headache treatment) 139264-17-8 CAPLUS RN

2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, CN (4S) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



NMe2

REFERENCE COUNT:

34

- (4) Buzzi, M; Br J Pharmacol 1990, V99, P202 CAPLUS REFERENCE(S): (5) Clitherow, J; J Med Chem 1994, V37, P2253 CAPLUS
  - (7) Connor, H; Migraine: Pharmacology and Genetics 1996, P18 CAPLUS
  - (11) Hamel, E; Mol Pharmacol 1993, V44, P242 CAPLUS (12) Humphrey, P; Trends Pharmacol Sci 1991, V12,

P444

CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 17 OF 33 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER:

1998:401358 CAPLUS

DOCUMENT NUMBER:

129:156990

TITLE:

Serotonin 5-HT1B/D receptor agonists

AUTHOR(S):

Martin, Graeme R.

CORPORATE SOURCE:

Institute of Pharmacology, Roche Bioscience, Palo

Alto, CA, USA

SOURCE:

Drugs Pharm. Sci. (1998), 89(Receptor-Based Drug

Design), 173-194

CODEN: DPHSDS; ISSN: 0360-2583

PUBLISHER:

Marcel Dekker, Inc.

DOCUMENT TYPE:

Journal; General Review

LANGUAGE:

English

agonists, esp. for the treatment of migraines and headaches. The author specifically highlights the drugs sumatriptan and zolmitriptan. IΤ 139264-17-8, Zolmitriptan RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (serotonin 5-HT1B/D receptor agonists as therapeutics) RN 139264-17-8 CAPLUS 2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, CN (4S) - (9CI) (CA INDEX NAME) Absolute stereochemistry. 0----S 0 NMe<sub>2</sub> N Η ANSWER 18 OF 33 CAPLUS COPYRIGHT 2001 ACS 1998:276552 CAPLUS ACCESSION NUMBER: DOCUMENT NUMBER: 129:46 TITLE: Zolmitriptan: a new acute treatment for migraine Rolan, P. E.; Martin, G. R. AUTHOR(S): Dep. of Neurol., Manchester Royal Infirmary, CORPORATE SOURCE: Manchester, UK Expert Opin. Invest. Drugs (1998), 7(4), 633-652 SOURCE: CODEN: EOIDER; ISSN: 1354-3784 Ashley Publications PUBLISHER: Journal; General Review DOCUMENT TYPE: English LANGUAGE: Zolmitriptan is a new oral acute treatment for A review with 93 refs. AB migraine. It is a selective and potent agonist at the serotonin (5-HT)1B/1D receptor and was developed to improve on the oral bioavailability, tissue selectivity and CNS penetration of earlier compds. Animal studies confirmed that these objectives had been attained. In man, zolmitriptan is rapidly absorbed after oral administration, with at least 75% of the eventual Cmax reached within 1 h. Oral bioavailability is approx. 40%. The elimination half-life of zolmitriptan is approx. 2.5 h and the primary route of elimination is metab., with one of the metabolites being pharmacol. active. A consistent 2-h headache response rate of 60-70% was obsd. at doses of 2.5 mg and above. Long-term treatment response is high (>80%) and consistent. In addn., there is evidence from electrophysiol. in migraineurs that zolmitriptan has a central action not shared by sumatriptan. Zolmitriptan is well-tolerated. The nature and incidence of the most frequently reported adverse events are similar to those of other 5-HT1B/1D agonists. Long-term zolmitriptan usage was assocd. With an improvement in quality of life. Zolmitriptan is a suitable first-line drug for acute treatment for migraine. 139264-17-8, Zolmitriptan: RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

A review with 73 refs. discussing the therapeutics of serotonin receptor

Absolute stereochemistry.

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O N NMe2
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L6 ANSWER 19 OF 33 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1998:66111 CAPLUS

DOCUMENT NUMBER: 128:145352

TITLE: Inclusion complex containing indole selective

serotonin agonist

INVENTOR(S): Penkler, Lawrence John; De Kock, Lueta-Ann;

Whittaker,

Darryl Vanstone

PATENT ASSIGNEE(S): Farmarc Nederland B.V., Neth.; Dyer, Alison,

Margaret;

Penkler, Lawrence John; De Kock, Lueta-Ann;

Whittaker,

Darryl Vanstone

SOURCE: PCT Int. Appl., 29 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

	PATENT NO.					ND :	DATE			A	PPLI	CATI	0.	DATE					
						A1 19980122				W	0 19	97 <b>-</b> G	2	19970711					
		W:	AL,	AM,	ΑT,	AU,	ΑZ,	BA,	BB,	ВG,	BR,	BY,	CA,	CH,	CN,	CU,	CZ,	DE,	
			DK,	EE,	ES,	FI,	GB,	GE,	GH,	HU,	IL,	IS,	JP,	ΚE,	KG,	ΚP,	KR,	KΖ,	
			LC,	LK,	LR,	LS,	LT,	LU,	LV,	MD,	MG,	MK,	MN,	MW,	MX,	NO,	NΖ,	PL,	
			PT,	RO,	RU,	SD,	SE,	SG,	SI,	SK,	SL,	ТJ,	TM,	TR,	TT,	UA,	UG,	US,	
			UZ,	VN,	YU,	ZW,	AM,	ΑZ,	BY,	KG,	ΚZ,	MD,	RU,	ТJ,	MT				
		RW:	GH,	KE,	LS,	MW,	SD,	SZ,	UG,	ZW,	ΑT,	BE,	CH,	DE,	DK,	ES,	FI,	FR,	
			GB,	GR,	ΙE,	IT,	LU,	MC,	NL,	PT,	SE,	ΒF,	ВJ,	CF,	CG,	CI,	CM,	GΑ,	
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	AU 9734551			Α	1	1998	0209		A	U 19	97-3	4551		19970711					
	AU 712546			В	2	1999	1111												
	CN 1225018			A 19990804				C	N 19	97-1	9629	4	19970711						
	BR 9710241			A 19990810				В	R 19	97-1	0241		19970711						
	CN 1230123			А	19990929				CN 1997-197767					19970711					
	JP 2000505090			T2 20000425				J	P 19	98-5	0572	5	19970711						
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										W	0 19	97-G	B187.	2	1997	0711			

An inclusion complex comprises (a) an indole selective serotonin (5-HTID) agonist or a pharmaceutically acceptable salt thereof, for example sumatriptan, and (b) unsubstituted or substituted .beta.— or .gamma.—cyclodextrin, for example Me .beta.—cyclodextrin. Pharmaceutical compns. contg. the inclusion complex and the use of the inclusion complex in the treatment of migraine and cluster headaches are also disclosed. A sumatriptan succinate-Me .beta.—cyclodextrin complex

139264-17-8DP, Zolmitriptan, complexes with cyclodextrin derivs. ΙT RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (inclusion complex contg. indole selective serotonin agonist) RN 139264-17-8 CAPLUS 2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, CN (4s) - (9cI)(CA INDEX NAME) Absolute stereochemistry. S. NMe2 Ν ANSWER 20 OF 33 CAPLUS COPYRIGHT 2001 ACS L6 1997:778609 CAPLUS ACCESSION NUMBER: DOCUMENT NUMBER: 128:84344 Clinical efficacy and tolerability of 2.5 mg TITLE: zolmitriptan for the acute treatment of migraine Solomon, G. D.; Cady, R. K.; Klapper, J. A.; Earl, N. AUTHOR(S): L.; Saper, J. R.; Ramadan, N. M. Cleveland Clinic Foundation, Cleveland, OH, USA CORPORATE SOURCE: Neurology (1997), 49(5), 1219-1225 SOURCE: CODEN: NEURAI; ISSN: 0028-3878 Lippincott-Raven Publishers PUBLISHER: DOCUMENT TYPE: Journal English LANGUAGE: Female and male patients, 12-65 yr old, with migraine (with or without aura) for .gtoreq.1 yr, 1-6 migraines per mo, and age at onset < 50 yr were included; 327 patients were screened and randomized to receive either zolmitriptan or placebo. Patients treated a single moderate or severe migraine headache with 2.5 mg zolmitriptan or placebo and recorded clin. efficacy and adverse events on a diary form. Headache response after 2 h was 62% for zolmitriptan compared with 36% for placebo; after 4 h, headache response was 70% and 37%, resp. Headache recurrence in patients treated with 2.5 mg zolmitriptan was 22% (vs. placebo 30%). The headache response after 4 h, pain-free rate, and response rate of nonheadache symptoms favored zolmitriptan over placebo. No serious adverse events were assocd. with zolmitriptan treatment. A 2.5-mg dose of zolmitriptan is clin. effective and well tolerated for the acute treatment of migraine. 139264-17-8, Zolmitriptan TΤ RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (migraine of humans treatment by) 139264-17-8 CAPLUS RN 2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, CN (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

was prepd.

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NMe<sub>2</sub>

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ANSWER 21 OF 33 CAPLUS COPYRIGHT 2001 ACS L6

ACCESSION NUMBER:

1997:778608 CAPLUS

DOCUMENT NUMBER:

128:84343

TITLE:

Optimizing the dose of zolmitriptan (Zomig, 311C90)

for the acute treatment of migraine. A

multicenter, double-blind, placebo-controlled, dose

range-finding study

AUTHOR(S):

Rapoport, A. M.; Ramadan, N. M.; Adelman, J. U.;

Mathew, N. T.; Elkind, A. H.; Kudrow, D. B.; Earl, N.

L.

CORPORATE SOURCE:

The New England Center for Headache, Stamford, CT,

USA

SOURCE:

Neurology (1997), 49(5), 1210-1218

CODEN: NEURAI; ISSN: 0028-3878

PUBLISHER:

Lippincott-Raven Publishers

DOCUMENT TYPE:

Journal

LANGUAGE:

English

AB Patients with a history of migraine were randomized to receive zolmitriptan orally at 1, 2.5, 5, or 10 mg or placebo for the treatment of

a severe or moderate migraine headache. Patients with persistent or recurrent headache 4-24 h after the initial dose, who did not take escape medication, were eligible to receive a 2nd blinded

dose of either zolmitriptan or placebo. The headache response rates with zolmitriptan doses .qtoreq.2.5 mg were 44-51% after 1 h,

after 2 h, and 75-78% after 4 h (all significantly superior to placebo). Also, zolmitriptan effectively relieved migraine-assocd.

symptoms such as nausea, photophobia and phonophobia, and reduced activity

impairment. Rates of **headache** recurrence, **headache** persistence, and use of escape medication were lower with zolmitriptan doses .gtoreq.2.5 mg than with placebo. In patients with persistent or recurrent headache, a 2nd zolmitriptan dose effectively treated both headache and nonheadache symptoms. Zolmitriptan was well tolerated, with a lower incidence of adverse events being reported with doses .ltoreq.2.5 mg than with those .gtoreq.5 mg. Thus, zolmitriptan is a well-tolerated and effective acute migraine therapy providing rapid relief of migraine headache within 1 h. A clear dose-response relationship between efficacy and tolerability suggests

that

2.5 mg is the optimal initial dose for the acute treatment of a migraine attack.

ΙΤ 139264-17-8, Zolmitriptan

RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study);

USES (Uses)

(optimum dose of zolmitriptan for the acute treatment of human migraine)

Absolute stereochemistry. H N 0----S 0 NMe<sub>2</sub> Ν ANSWER 22 OF 33 CAPLUS COPYRIGHT 2001 ACS 1997:437795 CAPLUS ACCESSION NUMBER: 127:116915 DOCUMENT NUMBER: Zolmitriptan TITLE: Palmer, Katharine J.; Spencer, Caroline M. AUTHOR(S): Adis International Limited, Auckland, N. Z. CORPORATE SOURCE: CNS Drugs (1997), 7(6), 468-479 SOURCE: CODEN: CNDREF; ISSN: 1172-7047 Adis PUBLISHER: DOCUMENT TYPE: Journal; General Review LANGUAGE: English A review with 50 refs. Zolmitriptan is indicated for the acute treatment of migraine with and without aura. The drug is a serotonin 5-HT1B/1D receptor agonist that has little or no affinity for other serotonin receptors or receptors of other neurotransmitters. Preclin. studies indicate that zolmitriptan has a novel dual mechanism of action, having effects at both central (trigeminal nucleus caudalis) and peripheral (trigeminovascular system) targets. Studies in volunteers demonstrate that zolmitriptan has relatively good oral bioavailability. Zolmitriptan is effective in alleviating migraine headache and also nonheadache symptoms such as photophobia, phonophobia and nausea. The tolerability of zolmitriptan is good, with the most common adverse experiences being paraesthesia, asthenia, nausea, somnolence and dizziness. Heaviness, tightness or pressure in the chest have been reported, but have not been assocd. with ECG abnormalities. IT 139264-17-8, Zolmitriptan RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (zolmitriptan therapy for migraines) 139264-17-8 CAPLUS RN 2-0xazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, (4S) - (9CI) (CA INDEX NAME) Absolute stereochemistry. Η

2-0xazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-,

O S NMe2

139264-17-8 CAPLUS

(4S) - (9CI) (CA INDEX NAME)

L6 ANSWER 23 OF 33 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1997:237719 CAPLUS

DOCUMENT NUMBER: 126:272250

TITLE: 311C90: long-term efficacy and tolerability profile

for the acute treatment of migraine

Zagami, A.S.

AUTHOR(S): CORPORATE SOURCE:

Department of Medicine, the St. George Hospital,

Sydney, 2217, Australia

SOURCE:

Neurology (1997), 48(3, Suppl. 3), S25-S28

CODEN: NEURAI; ISSN: 0028-3878

PUBLISHER:

Lippincott-Raven

DOCUMENT TYPE:

Journal

English LANGUAGE:

311C90 (Zomig; zolmitriptan) is a novel, selective serotonin (5HT)1B/1D receptor agonist with both central and peripheral activity, now in late-stage clin. development for acute oral treatment of migraine Several studies have demonstrated the tolerability and efficacy of

311C90 in the treatment of a single migraine headache.

The objectives of this open-label study were to assess the tolerability and efficacy of repeated doses of 5 mg of 311C90 for acute treatment of multiple attacks for up to 1 yr. Patients were allowed to treat as many

migraine headaches (mild, moderate, or severe) as desired with an initial dose. A second 5-mg dose could be used to treat

recurrence should it develop. Safety assessments included ECG, the frequency, intensity, and duration of adverse experiences, and routine hematol., urinalysis, and clin. chem. parameters. Efficacy assessments included headache severity at 2 h (i.e., severe, moderate, mild, or none), the proportion of patients pain-free at 2 h, the use of a

second

tablet to treat headache recurrence if it developed, and the consistency of these findings over time. The efficacy profile and the nature/incidence of adverse events reported appear to be consistent with previous 311C90 studies. The dosing regimen was well tolerated during multiple exposures. Notably, headache response rates were consistently good after both initial and repeated exposure (>80% across 1 to 30 attacks). For 67% of patients who treated at least five attacks, 311C90 was effective 80 to 100% of the time.

ΙT **139264-17-8**, 311C90

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(long-term efficacy and tolerability profile for the acute treatment

of

migraine using 311C90 in humans)

RN 139264-17-8 CAPLUS

2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, (4S) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.

N H

NMe<sub>2</sub>

ANSWER 24 OF 33 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER:

1997:237718 CAPLUS

DOCUMENT NUMBER:

126:272249

TITLE:

311C90: increasing the options for therapy with effective acute antimigraine 5HT1B/1D receptor

agonists

AUTHOR(S):

Ferrari, Michel D.

CORPORATE SOURCE:

Department of Neurology, Leiden University Hospital,

Leiden, 333A, Neth.

SOURCE:

Neurology (1997), 48(3, Suppl. 3), S21-S24

CODEN: NEURAI; ISSN: 0028-3878

PUBLISHER: Lippincott-Raven

DOCUMENT TYPE: Journal LANGUAGE: English

AB The novel antimigraine drug 311C90 (Zomig; zolmitriptan) has a high selectivity for serotonin (5HT)1 receptors, mainly 5HT1B and 5HT1D subtypes, and in preclin. studies it has been shown to act on four different sites within the trigemino-vascular system (blockade of neurogenic inflammation by inhibition of peptide release,

vasoconstriction, inhibition of neuronal depolarization at peripheral sites, and effects at central sites). Oral 311C90 has a favorable pharmacokinetic profile. It is rapidly absorbed, with 75% of maximal plasma concn. (Cmax) attained within 1 h and good abs. oral bioavailability (approx. 40%). Clin. studies have shown 311C90 to be

rapidly and consistently effective in relieving migraine headache, with initial doses of between 2.5 and 5 mg providing an

headache, with initial doses of between 2.5 and 5 mg providing an optimal balance between efficacy and safety considerations. Moreover,

the

good tolerability of 311C90 is supported by clin. data showing that doses up to 10-fold the therapeutic dose (2.5 mg) did not raise any serious safety concerns, highlighting the favorable safety profile of this drug.

IT **139264-17-8**, 311C90

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(increasing the options for therapy with 311C90 as an effective acute antimigraine 5HT1B/1D receptor agonist in humans)

RN 139264-17-8 CAPLUS

CN 2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

O N H

NMe<sub>2</sub>

L6 ANSWER 25 OF 33 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1996:651373 CAPLUS

DOCUMENT NUMBER: 125:317030

TITLE: Can oral 311C90, a novel 5-HT1D agonist, prevent

migraine headache when taken during

an aura?

AUTHOR(S):

Dowson, Andrew

CORPORATE SOURCE: Royal and Surrey Res

Royal and Surrey Research Unit, Royal Surrey County

Hospital, Guildford/Surrey, GU2 5XX, UK

SOURCE: Eur. Neurol. (1996), 36(Suppl. 2, 311C90: Further

Advances in the Pathogenesis and Acute Treatment of

Migraine), 28-31

CODEN: EUNEAP; ISSN: 0014-3022

DOCUMENT TYPE:

Journal

LANGUAGE:

English

The purpose of this pilot study was to det. whether 20 mg oral 311C90 can prevent the development of migraine headache when taken during the aura phase of a migraine attack. The study also aimed to provide an initial safety profile for 311C90 when taken during the aura. Forty patients (31 females, 9 males) were entered into this outpatient, double-blind, placebo-controlled, 2-period crossover trial. They all almost invariably experienced a migraine headache after the aura phase. Patients treated two

migraine attacks during the aura phase in a random order, one with
311C90 20 mg and the other with placebo. Efficacy assessments were
recorded on std. diary cards completed by each patient. A primary
response was defined as the complete absence of headache pain in
the 24 h period following administration of the first dose of study
medication. Safety assessments included ECGs, lab. tests and the
recording of adverse experiences. Twenty patients completed the study by
treating 2 attacks, 16 of these were fully adherent to the study
protocol.

Three of the 16 patients responded to 311C90 whereas all patients developed a migraine headache after taking placebo.
Two patients who did not respond to 311C90 described the developing

headache as being "non-migraine". Adverse experiences

reported were similar to those experienced by patients in previous studies

when 311C90 was taken during a migraine headache.

There were no reports of 311C90-related adverse effects on the aura. These preliminary results suggest that oral 311C90 may be of value in preventing a migraine headache and is safe when taken during the aura phase. This intriguing possibility therefore warrants further investigation possibly utilizing formulations that would deliver meaningful plasma levels of drug more rapidly.

IT 139264-17-8, 311C90

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (oral 311C90, a novel 5-HT1D agonist, may prevent migraine headaches when taken during an aura in humans)

RN 139264-17-8 CAPLUS

CN 2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



NMe2

L6 ANSWER 26 OF 33 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1996:651372 CAPLUS

DOCUMENT NUMBER: 125:317029

TITLE: Evaluation of the long-term safety and efficacy of

311C90 in the treatment of migraine

AUTHOR(S):

Geraud, Gilles E. A.

CORPORATE SOURCE: Service de Neurologie,

Service de Neurologie, Hopital Rangeuil, Toulouse,

F-31400, Fr.

SOURCE: Eur. Neurol. (1996), 36(Suppl. 2, 311C90: Further

Advances in the Pathogenesis and Acute Treatment of

Migraine), 24-27

CODEN: EUNEAP; ISSN: 0014-3022

DOCUMENT TYPE:

Journal

LANGUAGE: English

AB 311C90 is an orally active 5-HT1D agonist with both central and peripheral

actions that is currently being developed as an acute antimigraine treatment. Several studies have demonstrated the safety and efficacy of 311C90 in the treatment of a single migraine headache.

The objectives of this open study are to assess the safety and efficacy of

311C90 when used for a period of up to one year. Patients can treat as

many migraine headaches as desired with an oral treatment regimen of 311C90. An initial 5 mg dose for treatment of the migraine headache may be followed with a second 5 mg dose to treat recurrence should it develop. Safety assessments include electrocardiograms, the frequency, intensity and duration of adverse experiences, and routine haematol., urinalysis and clin. chem. measures. Data presented here are an interim view of the database as of August 1995 and should be considered as preliminary observations. No clin. significant serious adverse experiences have been reported. The adverse experience and efficacy profile appears to be consistent with previous 311C90 studies and this dosing regimen of 311C90 was well tolerated during

multiple exposures. Notably, response rates are as good after both initial and repeated exposure (up to 5 migraines).

IT **139264-17-8**, 311C90

RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study);

USES (Uses)

(evaluation of the long-term safety and efficacy of 311C90 in the treatment of **migraine** in humans)

RN 139264-17-8 CAPLUS

CN 2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, (4S)- (9CI) (CA INDEX NAME)

NMe<sub>2</sub>

Absolute stereochemistry.



L6 ANSWER 27 OF 33 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1996:651370 CAPLUS

DOCUMENT NUMBER: 125:292886

TITLE: Inhibition of the trigemino-vascular system with

5-HT1D agonist drugs: Selectively targeting

additional

sites of action

AUTHOR(S):

Martin, Graeme R.

CORPORATE SOURCE: SOURCE:

Wellcome Foundation, Beckenham/Kent, UK

Eur. Neurol. (1996), 36(Suppl. 2, 311C90: Further Advances in the Pathogenesis and Acute Treatment of

Advances in the Fathogenesis and Acute in

Migraine), 13-18

CODEN: EUNEAP; ISSN: 0014-3022

DOCUMENT TYPE:

Journal

LANGUAGE: English

AB Inappropriate activation of the trigemino-vascular system is thought to be

important in the pathogenesis of a **migraine** attack. The 5-HT1D agonist sumatriptan, which is highly effective in the acute treatment of **migraine**, inhibits trigemino-vascular activation in animals, although its actions are normally limited to peripheral components of the trigemino-vascular system. 311C90, a novel 5-HT1D agonist drug, which is also highly effective in the acute treatment of **migraine**, acts not only at these sites, but, addnl. within the brainstem, inhibiting trigemino-vascular activation centrally as well as peripherally. This article describes the pre-clin. development of 311C90 and considers, specifically, the approaches taken in the design of a mol. with

attributes

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which facilitate access to brainstem components of the trigeminal pathway
     and combine this with good oral bioavailability.
     139264-17-8, 311C90
     RL: BAC (Biological activity or effector, except adverse); BPR
(Biological
     process); THU (Therapeutic use); BIOL (Biological study); PROC (Process);
     USES (Uses)
        (inhibition of trigemino-vascular system with serotoninergic S1D
        agonists 311C90 and sumatriptan which selectively targeting addnl.
        sites of action in relation to oral bioavailability and
      migraine attack treatment)
     139264-17-8 CAPLUS
RN
     2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-lH-indol-5-yl]methyl]-,
CN
                 (CA INDEX NAME)
     (4s) - (9cI)
Absolute stereochemistry.
    0----
       S
0
                                     NMe<sub>2</sub>
      Ν
      Η
     ANSWER 28 OF 33 CAPLUS COPYRIGHT 2001 ACS
                         1996:651369 CAPLUS
ACCESSION NUMBER:
                         125:315884
DOCUMENT NUMBER:
                         Clinical safety of 311C90: Aggregated data from
TITLE:
                         patients and volunteers to date
AUTHOR(S):
                         Earl, Nancy L.
                         Glaxo Wellcome, Research Triangle Park, NC, 27709,
CORPORATE SOURCE:
USA
                         Eur. Neurol. (1996), 36(Suppl. 2, 311C90: Further
SOURCE:
                         Advances in the Pathogenesis and Acute Treatment of
                         Migraine), 8-12
                         CODEN: EUNEAP; ISSN: 0014-3022
                         Journal; General Review
DOCUMENT TYPE:
                         English
LANGUAGE:
     A review with 9 refs. The tolerability of 311C90, a novel, selective and
     highly effective 5-HTID receptor agonist in development for the acute
     treatment of migraine, has been evaluated in a no. of clin.
     pharmacol. and patient studies across the dose range 1-50 mg. 311C90 has
     been well tolerated across the entire dose range and no clin. relevant
     changes in routine lab. parameters, blood pressure or ECG recordings have
     been obsd. Adverse experiences reported are generally dose related, mild
     to moderate and resolve spontaneously. Chest-related symptoms occur
     infrequently and the cardiovascular safety profile of 311C90 is
considered
     particularly favorable. 311C90, therefore, possesses a desirable safety
     profile which is well suited to broad-based outpatient administration.
     139264-17-8, 311C90
IT
     RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or
     effector, except adverse); THU (Therapeutic use); BIOL (Biological
study);
     USES (Uses)
        (clin. safety of 311C90 in humans)
RN
     139264-17-8 CAPLUS
```

CN 2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-,
(4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

S 0 Ν H

0

NMe<sub>2</sub>

```
ANSWER 29 OF 33 CAPLUS COPYRIGHT 2001 ACS
```

ACCESSION NUMBER:

1996:651368 CAPLUS

DOCUMENT NUMBER:

125:317028

TITLE:

The clinical effectiveness of 311C90 in the acute

treatment of migraine

AUTHOR(S):

Ferrari, Michel D.

CORPORATE SOURCE:

Department Neurology, Leiden University Hospital,

Leiden, NL-2300, Neth.

SOURCE:

Eur. Neurol. (1996), 36(Suppl. 2, 311C90: Further Advances in the Pathogenesis and Acute Treatment of

Migraine), 4-7

CODEN: EUNEAP; ISSN: 0014-3022

DOCUMENT TYPE:

Journal

LANGUAGE:

English

Efficacy with currently marketed antimigraine compds. is less than optimal. 311C90 is a novel and selective 5-HT1D receptor agonist in development for the acute treatment of migraine. It shows evidence of both central and peripheral activity within the trigemino-vascular system and it is rapidly absorbed following oral administration. In clin. studies in migraine patients, a **headache** response at 2 h has been obsd. in 65-81% of patients at doses above 1 mg. Favorable response rates are reported as early as 1 h  $\,$ post-dose and efficacy rates continue to improve up to 4 h. Headache recurrence is reported by 25-35% of patients and 311C90 is also effective in relieving the non-headache symptoms of migraine.

**139264-17-8**, 311C90

RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study);

USES (Uses)

(clin. effectiveness of 311C90 in the acute treatment of migraine in humans)

RN 139264-17-8 CAPLUS

2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, CN (4S) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Н 0 -- ----S Ν

NMe<sub>2</sub>

ANSWER 30 OF 33 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER:

1996:401715 CAPLUS

DOCUMENT NUMBER:

125:67748

TITLE:

Methods of treating migraine with a

tachykinin antagonist and a serotonin agonist

INVENTOR (S):

Cohen, Marlene Lois; Johnson, Kirk Willis; Phebus,

Lee

Alan

PATENT ASSIGNEE(S):

Lilly, Eli, and Co., USA PCT Int. Appl., 59 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

SOURCE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PAS	KIND DATE					A.	PPLI	CATI	N NC	DATE							
WO	9611	000		Α.	1	1996	0418		W	 0 19	 95-U	s130	19951004				
														GE,		IS,	JP,
		ΚE,	KG,	ΚP,	KR,	ΚZ,	LK,	LR,	LT,	LV,	MD,	MG,	MK,	MN,	MW,	MX,	NO,
		NZ,	PL,	RO,	RU,	SD,	SG,	SI,	SK,	ТJ,	TM,	TT,	UA,	UG,	UZ,	VN	
	RW:	KE,	MW,	SD,	SZ,	UG,	BF,	ВJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	ML,	MR,	NΕ,
		SN,	TD,	TG													
US	5744	482	A			19980428			U:	s 19	94-3	1839	1	19941005			
EΡ	7104	79		Al 19960508				EP 1995-307000 19951003									
EP	7104	79		B1		19990107											
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AT	1753	47		E		1999	0115		A'	r 19	95-3	0700	0	1995	1003		
ES	2125	567		T	3	1999	0301		E:	s 19	95-3	0700	0	1995	1003		
AU	9641	301		A	1	1996	0502		A	U 19	96-4	1301		1995	1004		
PRIORITY	APP	LN.	INFO	.:					U:	s 19	94-3	1839	1	1994	1005		
									W	o 19	95-U	S130	87	1995	1004		

AB This invention provides methods for the treatment or prevention of migraines which comprises administering to a mammal in need thereof a combination of a tachykinin receptor antagonist and a serotonin agonist. This administration may be concurrent or sequential, with either

of the two activities being administered first.

IT 139264-17-8

RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (methods of treating **migraine** with a tachykinin antagonist and a serotonin agonist)

RN 139264-17-8 CAPLUS

CN 2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



NMe<sub>2</sub>

L6 ANSWER 31 OF 33 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1996:175609 CAPLUS

DOCUMENT NUMBER:

124:232432

TITLE:

Preparation of indole derivatives as prodrugs of

5-HT1-like receptor agonists

INVENTOR(S):

Blade, Robert John; Pang, Yih Sang; Selwood, David

Lawrence

PATENT ASSIGNEE(S):

Wellcome Foundation Ltd., UK

SOURCE:

PCT Int. Appl., 23 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

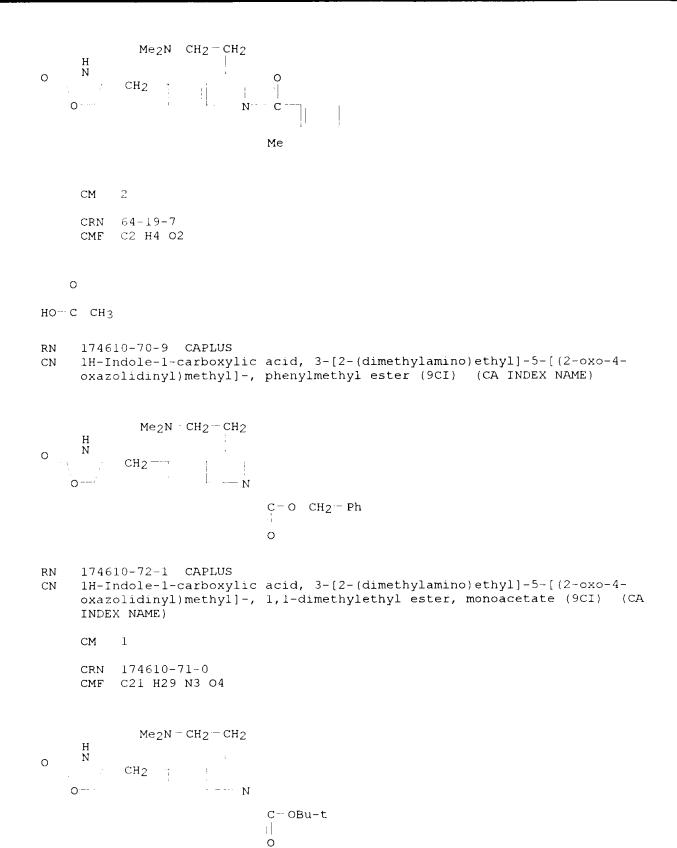
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KIND DATE
                                       APPLICATION NO. DATE
    PATENT NO.
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    _____
                    Al 19951207
    WO 9532966
                                       WO 1995-GB1249 19950531
        W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI,
            GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD,
            MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ,
            TM, TT
        RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT,
            LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE,
            SN, TD, TG
                                        AU 1995-26219
                                                         19950531
    AU 9526219
                     A1
                          19951221
                                        EP 1995-921004 19950531
    EP 765322
                     A1
                         19970402
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT,
SE
    JP 10500987
                      Т2
                          19980127
                                         JP 1995-500520
                                                         19950531
                                         US 1996-737759
    US 5962486
                      Α
                          19991005
                                                        19961122
                                         EP 1994-303928
PRIORITY APPLN. INFO.:
                                                          19940601
                                         WO 1995-GB1249 19950531
OTHER SOURCE(S):
                      MARPAT 124:232432
                R4
R^5Z
           N
R
                     Ι
    Title compds. [I; R = alkanoyl, alkoxycarbonyl, Bz, etc.; R4 =
    2-[(di)(alkyl)amino]ethyl, (1-alkyl)-4-piperidinyl, etc.; R5 =
    5-oxo-2-pyrrolidinyl, 2-oxo-4-oxazolidinyl, 2,5-dioxo-1-imidazolidinyl,
    etc.; Z = bond, (CH2)1-3] were prepd. as prodrugs for I (R = H). Thus, I
     (R4 = CH2CH2NMe2, R5 = 2-oxo-4-oxazolidinyl, Z = CH2)(II; R = Ac) had
    half-life of .apprx.3h for conversion to II (R = H) in rat plasma.
ΙT
    174610-65-2P 174610-67-4P 174610-69-6P
    174610-70-9P 174610-72-1P 174610-74-3P
    RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic
    preparation); THU (Therapeutic use); BIOL (Biological study); PREP
     (Preparation); USES (Uses)
       (prepn. of indole derivs. as prodrugs of 5-HT1-like receptor agonists)
    174610-65-2 CAPLUS
RN
    1H-Indole-3-ethanamine, 1-benzoyl-N, N-dimethyl-5-[(2-oxo-4-
CN
    oxazolidinyl)methyl]-, monoacetate (9CI) (CA INDEX NAME)
    CM
         1
    CRN 174610-64-1
    CMF C23 H25 N3 O3
```

C Ph

0

```
CH<sub>2</sub>
                        . ... N
                              C- Ph
                              0
          2
     CM
          64-19-7
     CRN
     CMF C2 H4 O2
   0
HO-C-CH3
     174610-67-4 CAPLUS
RN
     1H-Indole-3-ethanamine, 1-(2,2-dimethyl-1-oxopropyl)-N, N-dimethyl-5-[(2-
CN
     oxo-4-oxazolidinyl)methyl]-, monoacetate (9CI) (CA INDEX NAME)
          1
     CM
     CRN 174610-66-3
     CMF C21 H29 N3 O3
             \text{Me}_2\text{N}-\text{CH}_2-\text{CH}_2
                               C-Bu-t
     CM
     CRN 64-19-7
     CMF C2 H4 O2
   0
   i.
HO - C- CH3
     174610-69-6 CAPLUS
RN
     1H-Indole-3-ethanamine, N,N-dimethyl-1-(2-methylbenzoyl)-5-[(2-oxo-4-
CN
     oxazolidinyl) methyl] -, monoacetate (9CI) (CA INDEX NAME)
     CM
          1
     CRN 174610-68-5
     CMF C24 H27 N3 O3
```

CH<sub>2</sub>



CM 2

CRN 64-19-7

```
0
HO-C- CH3
RN
     174610-74-3 CAPLUS
    1H-Indole-3-ethanamine, 1-acetyl-N, N-dimethyl-5-[(2-oxo-4-
CN
     oxazolidinyl)methyl]-, monoacetate (9CI) (CA INDEX NAME)
          1
     CM
         174610-73-2
     CRN
     CMF C18 H23 N3 O3
            Me2N-CH2 CH2
          \mathtt{CH}_2
                            Ac
          2
     CM
    CRN 64-19-7
     CMF C2 H4 O2
   0
   Ì
HO-C--CH3
ΙT
     174610-75-4
     RL: RCT (Reactant)
        (prepn. of indole derivs. as prodrugs of 5-HT1-like receptor agonists)
     174610-75-4 CAPLUS
RN
     2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-,
CN
    monoacetate (9CI) (CA INDEX NAME)
     CM
          1
     CRN 139264-82-7
     CMF C16 H21 N3 O2
                            CH2 - CH2-NMe2
   0---
          2
     CM
     CRN 64-19-7
    CMF C2 H4 O2
```

L6 ANSWER 32 OF 33 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1995:746699 CAPLUS

DOCUMENT NUMBER: 123:132007

TITLE: Computer-Aided Design and Synthesis of 5-Substituted

Tryptamines and Their Pharmacology at the 5-HT1D Receptor: Discovery of Compounds with Potential Anti-

Migraine Properties

AUTHOR(S): Buckingham, Janet; Glen, Robert C.; Hill, Alan P.;

Hyde, Richard M.; Martin, Graeme R.; Robertson, Alan

D.; Salmon, John A.; Woollard, Patrick M.

CORPORATE SOURCE: Wellcome Research Laboratories, Beckenham/Kent, BR3

3BS, UK

SOURCE: J. Med. Chem. (1995), 38(18), 3566-80

CODEN: JMCMAR; ISSN: 0022-2623

DOCUMENT TYPE: Journal LANGUAGE: English

AB The design and synthesis of a series of novel 5-substituted tryptamines with pharmacol. activity at 5-HTlD and other monoamine receptors is described. Structural modifications of N- and C-linked (principally

hydantoin) analogs at the 5-position were synthesized and their

pharmacol.

activities were utilized to deduce significant steric and electrostatic requirements of the 5-HT1D and 5-HT2A receptor subtypes. Conformations

of

ΙT

the active mols. were computed which, when overlaid, suggested a pharmacophore hypothesis which was consistent with the affinity and selectivity measured at 5-HT1D and 5-HT2A receptors. This pharmacophore is composed of a protonated amine site, an arom. site, a hydrophobic pocket, and two hydrogen-bonding sites. A "selectivity site" was also identified which, if occupied, induced selectivity for 5-HT1D over 5-HT2A in this series of mols. The development and use of the pharmacophore models in compd. design is described. In addn., the physicochem. constraints of mol. size and hydrophobicity required for efficient oral absorption are discussed. Utilizing the pharmacophore model in conjunction with the physicochem. constraints of mol. size and log DpH7.4 led to the discovery of 311C90 (6), a new selective 5-HT1D agonist with good oral absorption and potential use in the treatment of

## migraine. 139264-17-8P

RL: BAC (Biological activity or effector, except adverse); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(design and synthesis and pharmacol. at 5-HT1D receptor of tryptamine derivs.)

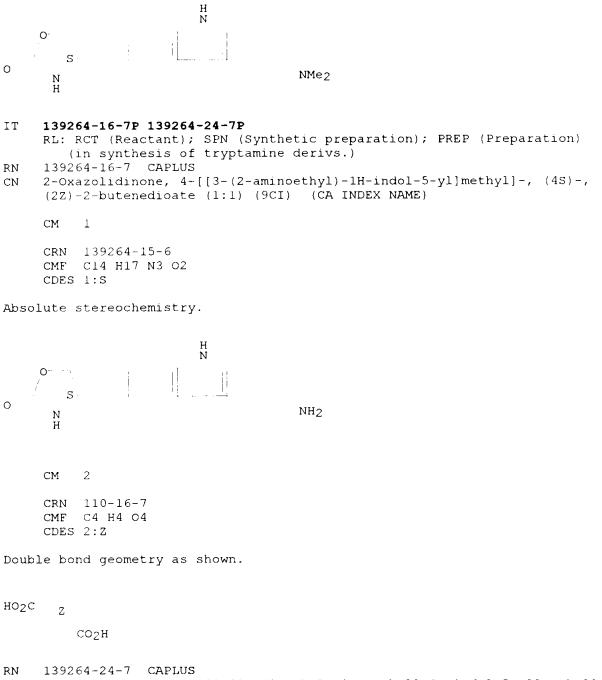
RN 139264-17-8 CAPLUS

CN 2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, (4S)- (9CI) (CA INDEX NAME)

NMe<sub>2</sub>

Absolute stereochemistry.

O N H



2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-, CN (R) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



ΙT 139264-15-6P RL: SPN (Synthetic preparation); PREP (Preparation)

Absolute stereochemistry.

```
O N NH2
```

L6 ANSWER 33 OF 33 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1992:174136 CAPLUS

DOCUMENT NUMBER: 116:174136
TITLE: Preparation of [(oxazolidinonylalkyl)indolyl]ethylamin

es and related compounds as serotonin agonists

INVENTOR(S): Robertson, Alan Duncan; Hill, Alan Peter; Glen,

Robert

Charles; Martin, Graeme Richard PATENT ASSIGNEE(S): Wellcome Foundation Ltd., UK

SOURCE: PCT Int. Appl., 75 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PAT	TENT NO.		KIND	DATE		APPLICATION NO.	DATE
WO	9118897 W: AU,	BR,	Al CA, FI,	HU, JP,	KR,	WO 1991-GB908 MC, NO, PL, SU, US	
						GB, GR, IT, LU, NL,	
CA	2064815		AA - :	19911208		CA 1991-2064815	19910606
ΑU	91/95/0		AI	19911231		AU 1991-79570	19910606
				19940310			1001000
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	486666						
						GB, GR, IT, LI, LU,	
zA	9104340		A	19930224		ZA 1991-4340 HU 1992-384	19910606
HU	62289		<b>A</b> 2	19930428		HU 1992-384	19910606
JΡ	05502679		T2	19930513		JP 1991-510103	19910606
JΡ	2738461		В2	19980408			
EΡ	636623		<b>A</b> 1	19950201		EP 1994-115107	19910606
	R: AT,	BE,	CH, DE,	DK, ES,	FR,	GB, GR, IT, LI, LU,	NL, SE
PL	166214		B1	19950428		PL 1991-293486 PL 1991-305191	19910606
PL	166799		В1	19950630		PL 1991-305191	19910606
	166800		В1	19950630		PL 1991-305192	19910606
ΙL	98392		<b>A</b> 1	19960119		IL 1991-98392	19910606
ΙL				19970218			19910606
				19970815			19910606
ES	2104708		Т3	19971016		ES 1991-911486	19910606
RU			C1	19980510		RU 1991-5011473	19910606
NO			А	19920330		NO 1992-494	19920206
	5399574			19950321		US 1992-838233	19920303
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						US 1994-341206	
	5863935		Ā	19990126			

FI 1996-155 19960112 19960112 FI 9600155 PRIORITY APPLN. INFO.: GB 1990-12672 19900607 19910201 GB 1991-2182 EP 1991-911486 19910606 19910606 IL 1991-98392 19910606 WO 1991-GB908 FI 1992-503 19920206 US 1992-838233 19920303 US 1994-341206 19941205 OTHER SOURCE(S): MARPAT 116:174136

Title compds. I [n = 0-3; W = Q1-Q3; R, R1, R2 = H, C1-4 alkyl; X = O, S,AB NH, CH2; Y = O, S; Z = CH2CH2NR1R2, Q; Q = 4-piperidyl, 1,2,3,6-tetrahydropyridin-4-yl, 1-C1-4 alkyl-4-piperidyl, 1-C1-4 alkyl-1,2,3,6-tetrahydropyridin-4-yl] were prepd. as 5-HT1-like receptor agonists for the treatment of migraines. Thus S-4-(4-nitrobenzyl)-1,3-oxazolidin-2-one (prepn. given) was hydrogenated over Pd/C and the product formed was diazotized in the presence of SnCl2 to give the 4-(4-hydrazinobenzyl) deriv. This was cyclocondensed with Cl(CH2)3CH(OMe)2 and the resulting (indolyl)ethylamine deriv. was di-N-methylated by H2CO/NaCNBH3 to give (S)-I [W = Q1; R = H, X, Y = O; n= 1; Z = CH2CH2NMe2] (II). II had p[A50] of 7.0 for mediating smooth muscle contraction where [A50] is the concn. necessary for half-maximal effect. II.HCl orally at 50 mg/kg/day for 15 days was not toxic to cynomolgus monkeys. Formulations of I were prepd.

139264-15-6P 139264-16-7P 139264-17-8P TΥ 139264-18-9P 139264-19-0P 139264-20-3P 139264-21-4P 139264-24-7P 139264-25-8P 139264-28-1P 139264-29-2P 139264-30-5P 139264-31-6P 139264-32-7P 139264-33-8P 139264-34-9P 139264-35-0P 139264-36-1P 139264-82-7P 139346-15-9P 141993-38-6P 141993-39-7P

> RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of, as serotonin agonist)

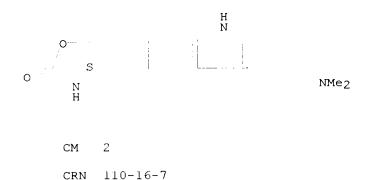
RN 139264-15-6 CAPLUS

2-0xazolidinone, 4-[[3-(2-aminoethyl)-1H-indol-5-yl]methyl]-, (S)- (9CI)CN (CA INDEX NAME)

```
0-
        S
0
                                        NH<sub>2</sub>
      Ν
     139264-16-7 CAPLUS
RN
     2-Oxazolidinone, 4-[[3-(2-aminoethyl)-lH-indol-5-yl]methyl]-, (4S)-,
CN
     (2Z)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)
     CM
           1
     CRN 139264-15-6
     CMF C14 H17 N3 O2
     CDES 1:S
Absolute stereochemistry.
     0
        S
0
                                        NH<sub>2</sub>
           2
     CM
     CRN 110-16-7
     CMF C4 H4 O4
     CDES 2:Z
Double bond geometry as shown.
HO<sub>2</sub>C
       Ζ
          CO<sub>2</sub>H
RN
     139264-17-8 CAPLUS
     2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-,
CN
     (4S) - (9CI) (CA INDEX NAME)
Absolute stereochemistry.
        S
                                         NMe<sub>2</sub>
      N
H
RN
     139264-18-9 CAPLUS
     2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-,
CN
     (4S)-, (2Z)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)
     CM
         1
```

CRN 139264-17-8 CMF C16 H21 N3 O2 CDES 1:S

Absolute stereochemistry.



Double bond geometry as shown.

HO<sub>2</sub>C Z

CO2H

CMF C4 H4 O4 CDES 2:Z

Absolute stereochemistry.



● HCl

```
RN 139264-20-3 CAPLUS
CN Butanedioic acid, compd. with
(S)-4-[[3-[2-(dimethylamino)ethyl]-1H-indol-
5-yl]methyl]-2-oxazolidinone (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 139264-17-8

CMF C16 H21 N3 O2

CDES 1:S
```

```
0
        S
0
                                       NMe<sub>2</sub>
      Ν
          2
     CM
     CRN
          110-15-6
     CMF
          C4 H6 O4
HO2C CH2 CH2 CO2H
     139264-21-4 CAPLUS
RN
CN
      2- 0 xazolidinone, \ 4- [[3-[2-(dimethylamino)ethyl]-1 H-indol-5-yl] methyl]-, \\
     (S)-, monobenzoate (9CI) (CA INDEX NAME)
     CM
          1
     CRN 139264-17-8
     CMF C16 H21 N3 O2
     CDES 1:S
Absolute stereochemistry.
                          H
N
     0-.. .
        S
0
                                       NMe2
      Ν
     CM
          2
     CRN 65-85-0
     CMF C7 H6 O2
       0
       C OH
     139264-24-7 CAPLUS
     2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-,
     (R) - (9CI) (CA INDEX NAME)
```

```
0
                                        NMe<sub>2</sub>
     139264-25-8 CAPLUS
RN
     2-Oxazolidinone, 4-{[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-,
CN
     monohydrochloride, (R) - (9CI) (CA INDEX NAME)
Absolute stereochemistry.
                                        NMe<sub>2</sub>
                   ● HCl
     139264-28-1 CAPLUS
RN
     2-Oxazolidinone, 4-[[3-(2-aminoethyl)-1H-indol-5-yl]methyl]-3-methyl-,
CN
     monohydrobromide, (S) - (9CI) (CA INDEX NAME)
Absolute stereochemistry.
                                        NH<sub>2</sub>
      Ν
      Me
                  HBr
     139264-29-2 CAPLUS
RN
     2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-3-
CN
     methyl-, (S)- (9CI) (CA INDEX NAME)
Absolute stereochemistry.
     0
                                        NMe<sub>2</sub>
      Ν
      Me
```

RN

139264-30-5 CAPLUS

```
2-Oxazolidinone, 4-[[3-[2-(dimethylamino)ethyl]-1H-indol-5-yl]methyl]-3-
CN
     methyl-, (4S)-, (2Z)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)
     СМ
          1
     CRN 139264-29-2
     CMF C17 H23 N3 O2
     CDES 1:S
Absolute stereochemistry.
    0----
        S
0
                                      NMe<sub>2</sub>
      Ν
      Me
     CM
          2
     CRN 110-16-7
     CMF C4 H4 O4
     CDES 2:Z
Double bond geometry as shown.
HO<sub>2</sub>C
       Z
         CO2H
     139264-31-6 CAPLUS
RN
     2-Oxazolidinone, 4-[[3-[2-[(phenylmethyl)amino]ethyl]-1H-indol-5-
CN
     yl]methyl]-, (S)- (9CI) (CA INDEX NAME)
Absolute stereochemistry.
                         H
N
    0
        S
                                            Ph
RN
     139264-32-7 CAPLUS
CN
     2-Oxazolidinone, 4-[[3-[2-[(phenylmethyl)amino]ethyl]-1H-indol-5-
     yl]methyl]-, (4S)-, (2Z)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)
     CM
          1
     CRN 139264-31-6
     CMF C21 H23 N3 O2
     CDES 1:S
Absolute stereochemistry.
```

```
H
N
    0
        S
0
                                      N
H
                                            Ph
          2
     CM
     CRN
          110-16-7
     CMF C4 H4 O4
     CDES 2:Z
Double bond geometry as shown.
HO<sub>2</sub>C
         CO2H
     139264-33-8 CAPLUS
RN
     2-Oxazolidinone, 4-[[3-[2-[methyl(phenylmethyl)amino]ethyl]-lH-indol-5-
CN
     yl]methyl]-, (S)- (9CI) (CA INDEX NAME)
Absolute stereochemistry.
                          H
N
                                       Ν
                                             ₽h
                                      Ме
     139264-34-9 CAPLUS
RN
     2-Oxazolidinone, 4-[[3-[2-[methyl(phenylmethyl)amino]ethyl]-IH-indol-5-
CN
     yl]methyl]-, (S)-, (2Z)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)
     СМ
          1
     CRN
          139264-33-8
     CMF C22 H25 N3 O2
     CDES 1:S
Absolute stereochemistry.
    0
        S
0
                                             Ph
                                       Ν
      N
H
                                      Me
```

CM 2



● HCl

RN 141993-38-6 CAPLUS
CN 2-Oxazolidinone, 4-[[3-(2-aminoethyl)-1H-indol-5-yl]methyl]-,
 monohydrochloride, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● HCl

RN 141993-39-7 CAPLUS CN 2-Oxazolidinone, 4-[[3-(2-aminoethyl)-1H-indol-5-yl]methyl]-, (R)- (9CI) (CA INDEX NAME)





Creation date: 09-16-2003

Indexing Officer: SCHASE1 - SUSAN CHASE

Team: OIPEBackFileIndexing

Dossier: 09659683

Legal Date: 03-13-2001

No.	Doccode	Number of pages
1	CTNF	6
2	892	1
3	1449	1

Total number of pages: 8

Remarks:

Order of re-scan issued on .....